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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In The Matter Of
Amendment Of The Commission's
Rules To Establish A New Radio
Service.

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RM-_____

To: The Commission

RADIO SHACK
DIVISION OF
TANDY CORPORATION

PETITION FOR RULE MAKING

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Dated: July 20, 1994

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SUMMARY

Tandy Corporation (Tandy) respectfully requests that the Commission initiate a rule making proceeding to establish a new unlicensed two-way voice radio service known as the Family Radio Service (FRS). Tandy envisions a low power service that would operate in the UHF band which is generally free of unwanted interference characteristic of services such as CB. The service would employ state-of-the-art technology and could be conveniently accessed by using light weight, palm-sized transceivers.

As Tandy explains below, FRS will help meet the burgeoning public demand for an affordable and convenient means of direct communication among individuals. Unlike many existing (and some proposed) radio services, FRS will not be interconnected with the public telephone network. Significantly, FRS can be established without allocating new spectrum and with virtually no impact on present radio users.

Because the need for FRS exists now, and because the technology and spectrum to meet that need are available today, Tandy respectfully requests that a Notice of Proposed Rule Making be issued forthwith.

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To: The Commission

PETITION FOR RULE MAKING

Tandy Corporation (Tandy), pursuant to Section 4(d) of the Administrative Procedure Act and Section 1.401 of the Commission's rules,^{1/} hereby petitions the Federal Communications Commission to institute a rule making proceeding to establish a new unlicensed two-way voice radio service. Tandy suggests that the Commission designate the new radio service the Family Radio Service (FRS).

As America's leading retailer of consumer electronics, Tandy has a significant interest in the retail equipment market for FRS. Tandy has nearly 7,000 Radio Shack, Computer City, Incredible Universe, and other affiliated stores nationwide, and more than 34,000 employees in the United States. Members of one-third of American households, more than 55 million consumers, frequent a Tandy store each year.

^{1/} 5 U.S.C. § 553(e) and 47 C.F.R. § 1.401.

I. THE FAMILY RADIO SERVICE - WHAT IS IT?

The Family Radio Service will be a two-way, short-range voice radio service that will meet the communications needs of Americans in myriad situations. Whether on the road or on neighborhood patrol, FRS -- with its superior FM communications quality -- will enable individuals to maintain close contact without the burdensome licensing and technical requirements of existing radio services. Such services often are beyond the needs of individuals and, frequently, their means.

FRS will serve the day-to-day as well as emergency communications needs of families, friends and public service organizations. FRS will not be akin to PCS. It will not be interconnected to the public telephone network. Nor will FRS have any activation, monthly service, or per-minute charges. Rather than using high powered equipment typical of the General Mobile Radio Service ("GMRS"), FRS will use 500-milliwatt, palm-size transceivers. However, like GMRS, FRS will operate in the UHF frequency which is generally free of unwanted interference common in the overcrowded CB bands.

In sum, FRS will fill a market void by providing Americans with convenient, high quality, short-range communication capabilities not met by any existing or proposed radio service, with only a modest initial investment and virtually no incremental cost.

A. FRS Is Needed Now

There is mounting evidence of the public's need for a readily accessible communications capability to promote public safety and combat crime.^{2/} FRS will help meet this need and will especially benefit public safety groups such as Neighborhood Watch and Tot Finders, who provide communications that are vital to the public interest but who otherwise are inhibited by restrictive requirements from using radio services such as GMRS.^{3/} Because it will be an unlicensed service, FRS will enable public safety groups such as REACT (Radio Emergency Associated Communications Teams) to provide communications capabilities, ad hoc, to other parties engaged in community efforts such as searching for lost children, neighborhood patrols and emergency rescue and disaster relief efforts.

FRS also will serve the needs of the general public. Individuals will have the ability to conveniently communicate in a diversity of everyday situations without incurring exorbitant per minute charges or monthly service fees. Parents will have an extra measure of security by using FRS to monitor their children at play. Families and friends will be able to maintain close contact at

^{2/} See, e.g., Serge F. Kovalski, *D.C. Merchants Planning Radio Link To Fight Crime*, WASH. POST, Feb. 23, 1994, at D1 (attached hereto as Exhibit A).

^{3/} Members of public safety organizations can only utilize GMRS if they hold individual licenses. See Report and Order in PR Docket No. 87-265, Amendment of Subparts A and E of Part 95 to Improve the General Mobile Radio Service, 3 FCC Rcd 6554, 6556 at ¶ 21 (1988) (GMRS Report & Order) ("[M]embers of volunteer public service groups that do not have individual GMRS licenses must obtain them, unless that particular group is grandfathered.").

sporting events, shopping malls, parks and between vehicles during trips. Impromptu groups will be able to communicate conveniently using FRS for activities such as fund raising and social events.

The popularity of FRS-like services in other countries confirms the strong demand and public utility of the high quality, affordable communications FRS will provide. In Japan, for example, an unlicensed radio service similar to FRS was initiated in 1989 and millions of transceivers are in use.^{4/} Tandy believes that the United States should not be eclipsed by Japan and other countries whose citizens have already started to enjoy the many benefits of FRS-like radio services.

By establishing this innovative and much-needed service, the Commission will further its mandate to "generally encourage the larger and more effective use of radio in the public interest." 47 U.S.C. § 303(g). The need for FRS is manifest. Its ultimate success, however, hinges upon it being an unlicensed service.

B. Unlicensed FRS Will Serve The Public Interest

Immediate unlicensed access to FRS will be a driving force in promoting activity on the band. GMRS and other FCC licensing requirements are a formidable barrier to many individuals who might otherwise avail themselves of such radio services. Absent such impediments, FRS will flourish.

^{4/} Tandy understands that the unlicensed Japanese "Personal Communicator" service includes 9 channels for leisure use and 11 channels for business purposes.

Significantly, unlicensed FRS will spare FCC Staff the burden of processing additional paperwork. When Congress authorized delicensing of the CB and Radio Control radio services,^{5/} it found that delicensing would "produce significant savings without impairing important regulatory interests."^{6/} The Commission, in turn, concluded "that licensing in these services serves only a minimal function . . . one better served by the type acceptance and operating rules and enforcement of those rules."^{7/} The Commission also concluded that delicensing "would result in significant cost savings and in substantial administrative savings."^{8/}

More recently, when the Commission abolished the end-user licensing requirement for the Specialized Mobile Radio Service, it found, as it should with respect to FRS, that it "would save significant user time, money and resources, while also reducing substantially the Commission's administrative costs and efforts."^{9/} In short, an unlicensed Family Radio Service will serve the public interest and conserve FCC resources.

^{5/} See 47 U.S.C. § 307(e)(1).

^{6/} H.R. Conf. Rep. No. 765, 97th Cong., 2d Sess. 20 (1982), reprinted in 1982 U.S.C.C.A.N. 2261, 2264.

^{7/} Elimination of Individual Station Licensing in Radio Control Radio Service and Citizens Band Radio Service, PR Docket No. 82-799, 48 Fed. Reg. at 24,886 (1983).

^{8/} Id. at 24,887.

^{9/} Amendment of Part 90 of the Commission's Rules To Eliminate Separate Licensing of End Users of Specialized Mobile Radio Services, 7 FCC Rcd 5558, 5559 at ¶ 7 (1992).

C. FRS Equipment

The equipment envisioned for FRS is a palm-size transceiver with a very short antenna -- smaller and more convenient than a handheld CB unit -- but providing clear, short-range FM communications. Tandy anticipates that FRS units will be available in a variety of configurations, including features such as private channel calling via CTCSS (Continuous Tone Controlled Squelched System), priority channel calling, channel scan, etc. More advanced FRS units may include such features as programmable tone-coded ID numbers that can be used to access individuals or groups of users. For example, each member of a neighborhood crime watch patrol could have an ID number with a common prefix and unique suffix. Depending on the code transmitted, receivers could be activated individually or collectively.

Tandy has conducted extensive field tests in the Dallas-Ft. Worth, Texas metropolitan area to determine the optimum power levels, the interference potential and the utility of FRS.^{10/} Tests have been conducted in numerous situations, both in- and outdoors, including residential and shopping areas, office buildings, sporting arenas, open fields, across water, vehicle-to-vehicle, and recreational venues such as parks and playgrounds. Just recently, Tandy tested FRS at the Walt Disney World theme park

^{10/} FCC Special Temporary Authorization, file number S-1246-EX-93, call sign KS2XAZ, effective October 1, 1993, 6-month extension granted effective April 1, 1994, file number S-1451-EX-93.

in Orlando, Florida with great success.^{11/} Tandy has determined that a transmitter power of 500 milliwatts will provide reliable clear communications while allowing the unit to operate for only pennies on small dry cell batteries.

II. FRS SPECTRUM IS AVAILABLE NOW

FRS can be established without allocating new spectrum and, more importantly, with no discernable impact on present radio service users. FRS will offer distinct advantages and flexibility which will result in more efficient spectrum usage by adding new users on the seven unused and seven underutilized interstitial channels in the GMRS spectrum.^{12/} Because GMRS interstitial channels can readily accommodate the large number of new users FRS is certain to attract,^{13/} Tandy proposes that FRS share those

^{11/} FCC Special Temporary Authorization, file number S-1541-EX-94, call sign KS2XAZ, effective June 11 through June 25, 1994, inclusive.

^{12/} In 1988, the Commission released the seven 462 MHz interstitial channels for simplex operation by mobile and small base stations. See GMRS Report & Order, 3 FCC Rcd at 6561, ¶ 65. The seven 467 MHz interstitial channels were warehoused to permit the GMRS community to present to the Commission a comprehensive plan for enhanced GMRS repeater usage. Id. at ¶ 63. During the nearly six-year period following the GMRS Report & Order, no plan has been advanced nor has the use of the 467 MHz channels been requested. Tandy understands that the number of licensed GMRS systems is approximately 30,000, operating on 8 simplex channels, 8 duplex channel pairs, and the 7 assigned interstitial channels.

^{13/} The Commission restructured GMRS in 1988 "to make the service more efficient and effective for personal users." GMRS Report & Order, 3 FCC Rcd at 6554, ¶ 1. By proposing FRS, Tandy is furthering the Commission's goal of providing more accessible service for personal users.

(continued...)

channels on a secondary basis. Tandy proposes operations limited to transmissions on the following frequencies:

<u>Assigned Interstitial Channels</u>	<u>Unassigned Interstitial Channels</u>
462.5625 MHz	467.5625 MHz
462.5875 MHz	467.5875 MHz
462.6125 MHz	467.6125 MHz
462.6375 MHz	467.6375 MHz
462.6625 MHz	467.6625 MHz
462.6875 MHz	467.6875 MHz
462.7125 MHz	467.7125 MHz

Tandy also believes the public interest would be well served by permitting FRS users to access the GMRS 462.675 MHz/467.675 MHz emergency channel pair. See 47 C.F.R. § 95.29(e). Tandy understands, however, that not all repeater systems on the emergency frequencies are open. In the interest of public safety, Tandy suggests the Commission review how such repeaters are accessed.^{14/}

^{13/}(...continued)

The establishment of FRS also should benefit GMRS. In much the same way as the "codeless" license was conceived as a way to participate at the entry level in the Amateur Radio Service (see PR Docket No. 90-55, 56 Fed. Reg. 27 (Jan. 2, 1991)), FRS will provide users with exposure to the additional features and capabilities of GMRS. Some FRS users will choose to upgrade to that more powerful, licensed service.

Anecdotal evidence suggests numerous unlicensed users are operating in spectrum assigned to licensed services such as GMRS and the Amateur Radio Service. Establishing FRS will provide a legitimate service which should help mitigate the unauthorized loading on those bands.

^{14/} Presently, "[a] mobile relay station in a GMRS system must not automatically retransmit communications between" mobiles in other GMRS systems unless it "has given permission to use the (continued...)"

Finally, in order to ensure that FRS transmissions do not interfere with GMRS transmissions,^{15/} Tandy suggests transmitter output power of 500 milliwatts.^{16/}

III. FRS SHOULD BE ESTABLISHED AS A PART 95 SERVICE

The Commission should amend the rules governing Personal Radio Services (47 C.F.R. Part 95) by adding a new Subpart G, entitled Family Radio Service. FRS will be a logical complement to the existing Part 95 services. It would share (on a secondary basis) seven 462 MHz assigned and seven 467 MHz unassigned interstitial channels with GMRS. If the Commission finds it would serve the public interest, FRS users also will be able to access the GMRS emergency channel pair. Finally, like the Radio Control and Citizens Band radio services (and IVDS), FRS will not require licensing of individual users.

^{14/}(...continued)
mobile relay station for this purpose." 47 C.F.R. § 95.57(b)(1)(ii). Thus, emergency repeaters are not necessarily open to members of the general public. Tandy believes an open repeater network for the emergency channel pair will afford considerable public safety benefits without impairing legitimate GMRS concerns.

^{15/} Throughout its extensive testing at 500 milliwatts, Tandy received no reports of interference to other users on the proposed bands.

^{16/} That is, allowable power would be 10dB less than the maximum (5 watts ERP) allowed to licensed GMRS operators on the interstitial channels. Spurious emissions from transmitters operating on primary frequencies must be a minimum of 25dB down from the transmitter power (TP). As maximum allowable power on the primary channels is 50 watts, the transmitter power in the proposed service will be 20dB below TP or only 5dB more than allowed spurious radiation. See also 47 C.F.R. Part 95, Subpart E (Technical Regulations).

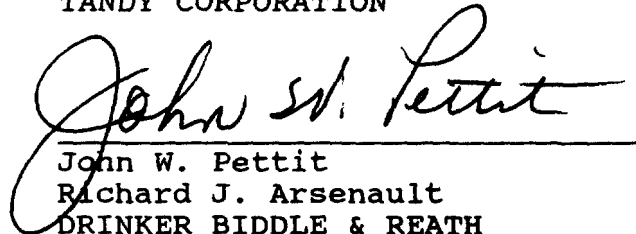
IV. CONCLUSION

WHEREFORE, in view of the foregoing, Tandy Corporation respectfully requests that the Commission expeditiously issue a *Notice of Proposed Rule Making* proposing the creation of a new, unlicensed Family Radio Service as described above.

July 20, 1994

Respectfully submitted,

RADIO SHACK DIVISION OF
TANDY CORPORATION

A handwritten signature in cursive script, reading "John W. Pettit", is written over a horizontal line.

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EXHIBIT A

D.C. Merchants Plan Anti-Crime Radio Network

By Serge F. Kovalski
Washington Post Staff Writer

Asian American business leaders and community activists are spearheading a drive to equip District shopkeepers with two-way radios and create informal communication networks designed to head off crime and make merchants less dependent on police response.

Organizers said the unusual initiative, which would start as a pilot program in as many as four crime-troubled Washington neighborhoods, is not confined to business owners of Asian descent and neither is support for it.

"These folks out there who are stealing will steal from an Asian, a black or a blue or a green," said Thomas Caviness, owner of Tynisha's Art & Gift Shop, in the 5200 block of Georgia Avenue NW. "I would be glad to look into a group effort to fight crime; I don't care who is putting it together."

By using walkie-talkies, organizers said, merchants within about a 10-square-block area could alert one another to suspicious activity in the neighborhood, request help at closing time or report a crime to nearby shopkeepers, who



BY JUANA ARIAS—THE WASHINGTON POST

The planned walkie-talkie program resembles one devised by store owner Leo Vondas.

might be able to spot a thief running away and identify that person to police.

The same tactic was adopted by Mount Pleasant business owners more than two years ago in response to crime problems in that Northwest Washington neighborhood, and by Korean merchants in Los Angeles shortly after the riots there in 1992 that led to widespread looting and vandalism. Radio networks also have been set up by Asian American merchants in New York.

The proposed network is part of a broader strategy by Washington's merchants to better protect themselves, spurred largely by a

See RADIOS, D3, Col. 1

Walkie-Talkie Network May Protect Merchants

RADIOS, From D1

series of gun attacks in District shops last year.

Many Asian American shopkeepers said their fear of crime is still acute, despite promises made by D.C. Mayor Sharon Pratt Kelly and Police Chief Fred Thomas seven months ago to provide better security for small businesses in high-crime neighborhoods. Some Asian merchants, particularly those of Vietnamese and Chinese descent, have complained that initiatives, such as distributing robbery-prevention tips in their native languages, have not been put into place.

The department has distributed crime-prevention tips in Korean, and two officers of Korean descent have been assigned to the department's community affairs division. Overall, the merchants have complained that foot patrols have not been increased enough.

"We are taking safety into our own hands," said Douglas Kim, president of the Korean American Chamber of Commerce. "The police department is doing better work with us because we have pushed them, but it is still not good enough."

Kathleen Hom, Kelly's special assistant for Asian and Pacific Islander affairs, said the radio network would help police fight crime. "As they [merchants] get more comfortable with each other, they get more comfortable with the community and learn how to work more closely with the police," she said.

Organizers acknowledge that language differences among merchants, some of whom speak little or no English, will be a significant obstacle. But some business owners say they hope a crackling radio alone will give the illusion of a police presence and help deter robberies.

Kim said the Chamber of Commerce has ordered two walkie-talk-

ies for testing that are due to be delivered by the end of next month, and it has an option to buy 100 more. He said the radios will cost \$50 to \$100 each. The chamber will buy the radios and sell them to merchants for the same price.

The willingness of merchants to participate in the program will make or break it, organizers said.

In a survey conducted in November by the Asian Pacific American Bar Association, the majority of merchants polled said they would be willing to participate in a walkie-talkie program. But most of those surveyed said they did not want to pay for stepped-up security, because their budgets are tight. Organizers are exploring ways of raising money for the radios.

Some business owners are crackling with enthusiasm about the program despite the cost, saying their only hope of beating back crime is banding together.

Fifty-three people were slain in robberies and attempted robberies in the District last year, compared with 47 robbery-related homicides in 1992. Though police do not keep separate statistics for commercial robberies, 10 people were killed last year during robberies at stores owned by Asian Americans, who hold about two-thirds of the business licenses in the city.

"If we can outsmart the criminals by using radios and always being at the ready, hopefully, we can scare them off," said Yong Kim, who was robbed at gunpoint at his Anacostia liquor store twice in the last year. "There is no reason not to try this."

Organizers said four areas targeted as possible sites for the pilot program are Anacostia in Southeast, upper Georgia Avenue NW, 14th Street NW and North Capitol Street.

The idea of equipping more merchants with walkie-talkies was hatched late last year. At a meeting conducted by the mayor's Commission on Asian and Pacific Islander Affairs, Leo Vondas, former president of the Mount Pleasant Business Association and owner of Sportsman's Wine and Liquors, recommended the walkie-talkie program that he helped create in the neighborhood where he does business.

"It's a tremendous tool in fighting major and minor crimes, from armed robbery to shoplifting," Vondas said yesterday.

He estimated that the network of about 12 walkie-talkies on Mount Pleasant Street NW, from Park Road to Irving Street, has been responsible for foiling dozens of crimes.

Vondas said that initially there were some communication problems because of language barriers. But the shopkeepers, representing a half-dozen ethnic groups, have managed to devise codes and use humans' natural ability to communicate, he said.

"Over time, you learn to adapt," he said. "We have found that there is always a person at each business who can speak on the radio."

CERTIFICATE OF SERVICE

I, Joanne K. Comisiak, hereby certify that on this 20th day of July 1994 I caused a copy of the attached Petition for Rule Making of Tandy Corporation to be served by hand delivery to the following:

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